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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/608,560      | 06/30/2003  | Hong Wang            | 3691-570            | 7266             |

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EXAMINER

STEIN, STEPHEN J

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1775

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/608,560

**Applicant(s)**

WANG ET AL.

**Examiner**

Stephen J. Stein

**Art Unit**

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-10,12-17 and 19-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-10,12-17 and 19-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/3/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### *Claim Rejections - 35 USC § 112*

2. Claims 8, 10, 21 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 8, 10 and 21 recite the limitation “a layer comprising an oxide of nickel and/or chrome”. This limitation makes the claims indefinite, because it is unclear if the limitation is referring to --a layer comprising nickel oxide and/or an oxide of chrome--, or in the alternative -- a layer comprising nickel oxide and/or chrome--.

4. Claim 22 recites the limitation “wherein the IR reflecting layer comprises NiCr, Nb and/or NbCr”. This limitation makes the claims indefinite, because it is unclear if applicants are claiming in the alternative or not. The examiner suggests claiming in proper Markush form to remove ambiguity from the claims.

5. Claim 12 –17, 19, 20, 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation “and wherein the underlayer does not contact any IR reflecting layer comprising silver in the coating” is new matter.

***Claim Rejections - 35 USC § 102***

6. Claims 23, 26-28, 31 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,830,817 (Stochowiak).

Stochowiak teaches a coated article comprising a glass substrate, an IR reflecting layer comprising silver over the glass substrate and an overcoat layer comprising an under layer of niobium oxide and an outer layer of silicon nitride (See Figure 9). The reference further teaches that the coated article has a layer of  $\text{NiCrO}_x$  between the IR reflecting layer and the underlayer of the overcoat layer (Figure 9). The reference finally teaches that the silicon nitride outer layer may be 3 times thicker than the underlayer (See col. 29 and 30).

***Claim Rejections - 35 USC § 102***

7. Claims 1-4, 6, 8, 9, 25-29 and 31-33 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,132,881 (Hartig '881).

Hartig '881 discloses a glass substrate having a lower intermediate layer of SiN, a metallic silver layer (IR reflecting layer), an upper intermediate layer of an oxide or nitride of Zn, Cr, Ta and mixtures thereof, and an overcoat layer of SiN (See col. 14, lines 38-65). The examiner interprets the silver layer to be equivalent to two IR reflecting silver layers next to each other under the overcoat. Hartig '881 further teaches that the thickness of the SiN overcoat layer (overcoat outer layer) is 350 to 700 angstroms and the upper intermediate layer (under layer) has a thickness of no more than 15 angstroms (col. 7 and 8). Therefore the thickness of the upper

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intermediate layer (Outer overcoat layer) is more than 3 times as thick as the upper intermediate layer (under layer).

***Claim Rejections - 35 USC § 103***

8. Claims 5 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartig '881 in view of US 6,159,607 (Hartig '607).

As stated above, Hartig '881 teaches all the limitations of claim 1, and further teaches that the coated article has a visible transmittance of 84-90% (col. 4, lines 14-31). Hartig '881 is silent on the SiN overcoat layer further including aluminum.

Hartig '607 teaches a similar IR reflecting coated glass article and further teaches that the SiN overcoat layer was prepared using a target comprising 95% Si and 5% Al (e.g. the SiN layer will have some aluminum present).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the Hartig '881 SiN overcoat layer have aluminum present in the layer since the '607 teaches that Al is typically used in forming such layers for similar structured articles.

***Response to Arguments***

9. Applicants have amended the claims and argue that the Sol reference is not prior art against 26-29, 31 and 32 since parent case 09/794,224 filed February 28, 2001 has the same disclosure as Sol and therefore the claims are entitled priority back to the February 28, 2001 filing date of the CIP parent. This argument has been persuasive and the rejections over the Sol reference have been withdrawn.

Applicants further argue that the Stachiowak reference fails to teach the newly added limitation to claim 12 that the underlayer does not contact any IR reflecting layer comprising silver in the coating. In response to this amendment, the rejections over claim 12 and its dependent claims over the Stachiowak reference have been withdrawn. Upon a reevaluation of this reference and the amended claims, rejections over the Stachiowak reference have now been applied against amended claims 23, 26-28, 31 and 32, which do not contain the above limitation. Further, a new matter rejection has been made against claim 12 and its dependent claims since support for the amendment can be found in applicants' disclosure.

Regarding claim 26 and its dependent claims, applicants further argue that Stachiowak is not prior art against these claims for the same reason as Sol discussed above. This argument is not found to be persuasive since independent claim 26 does not have appear to have support all the way back to the 09/794,224 application. Consequently, the Stachiowak reference is at least prior art against these claims.

New rejections have also been made over newly cited prior art of record.

### ***Conclusion***


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Stein whose telephone number is 571-272-1544. The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 5:00 p.m. If the attempts to reach the examiner are unsuccessful, the examiner's supervisor, Deborah Jones can be reached by dialing 571-272-1535. The official fax number is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 25, 2005



Stephen J. Stein  
Primary Examiner  
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